The following is a complete listing of all claims in the application, with an indication of the status of each:

**Listing of claims:**

1-3. (canceled)

4. (previously presented) A computer implemented method of resource allocation to yield a benefit comprising the steps of:

associating each customer's demand with a benefit gained;

finding a time-varying allocation of resources that would yield a benefit which is based on the benefit gained associated with one or more customer's demands;

implementing the time-varying allocation of resources amongst one or more customers to yield said benefit;

discounting future benefits; and

finding optimal allocations of resources from current time through current time plus lookahead based on discounted benefit and forecast demand, wherein the step of discounting future benefits is based on a future discounting algorithm,

wherein the future discounting algorithm is a deterministic algorithm that achieves a competitive ratio of $(1 + 1/L)(L + 1)^{1/L}$, where L is a lookahead factor which models some amount of future demand known to a provider of the resource.

5. (previously presented) A computer implemented method of resource allocation to yield a benefit comprising the steps of:

associating each customer's demand with a benefit gained;

finding a time-varying allocation of resources that would yield a benefit which is based on the benefit gained associated with one or more customer's demands;

implementing the time-varying allocation of resources amongst one or more customers to yield said benefit;

discounting future benefits; and

finding optimal allocations of resources from current time through current time plus lookahead based on discounted benefit and forecast demand, wherein the step of discounting future benefits is based on a future discounting algorithm,

wherein the algorithm is an intermittent reset algorithm that achieves a competitive ratio of $1 + 4/(L-7)$, where $L$ is a lookahead factor which models some amount of future demand known to a provider of the resource.

6-14. (canceled)

15. (previously presented) A computer implemented method of resource allocation to yield a benefit comprising the steps of:

modeling a resource allocation problem mathematically;

in the model obtained from said modeling step, dividing time into intervals of fixed length based on the assumption that demand is uniformly spread throughout each such interval; and

associating each customer's demand with a benefit gained; and

finding a time-varying allocation of resources that would maximize a benefit which is based on the benefit gained associated with one or more customer's demands;

implementing the time-varying allocation of resources amongst one or more customers to maximize said benefit;

discounting future benefits; and

finding optimal allocations of resources from current time through current time plus lookahead based on discounted benefit and forecast demand, wherein the step of discounting future benefits is based on a future discounting algorithm,

wherein the future discounting algorithm is a deterministic algorithm that achieves a competitive ratio of $(1 + 1/L) (L + 1)^{1/L}$, where $L$ is a lookahead factor which models some amount of future demand known to a provider of the resource.

16. (previously presented) A computer implemented method of resource allocation to yield a benefit comprising the steps of:

modeling a resource allocation problem mathematically;

in the model obtained from said modeling step, dividing time into intervals of fixed length based on the assumption that demand is uniformly spread throughout each such interval; and

associating each customer's demand with a benefit gained; and

finding a time-varying allocation of resources that would maximize a benefit which is based on the benefit gained associated with one or more customer's demands; and

implementing the time-varying allocation of resources amongst one or more customers to maximize said benefit,

wherein the algorithm is an intermittent reset algorithm that achieves a competitive ratio of $1 + 4/(L-7)$, where $L$ is a lookahead factor which models some amount of future demand known to a provider of the resource.

17-24. (canceled)

25. (previously presented) A method for server allocation in a Web server "farm" based on limited information regarding future loads to achieve close to greatest possible revenue based on an assumption that revenue is proportional to the utilization of servers and differentiated by customer class comprising the steps of:

modeling the server allocation problem mathematically;

in the model, dividing time into intervals of fixed length based on the assumption that each site's demand is uniformly spread throughout each such interval;

maintaining server allocations fixed for the duration of an interval, servers being reallocated only at the beginning of an interval, and a reallocated server being unavailable for the length of the interval during which it is reallocated providing time to "scrub" the old site (customer data) to which the server was allocated, to reboot the server and to load the new site to which the server has been allocated, each server having a rate of requests it can server in a time interval and customers share servers only in the sense of using the same servers at different times, but do not use the same servers at the same time; and

associating each customer's demand with a benefit gained by the service provider in case a unit demand is satisfied and finding a time-varying server allocation that would maximize benefit gained by satisfying sites' demand,

wherein the future discounting algorithm is a deterministic algorithm that achieves a competitive ratio of $(1 + 1/L)\,(L + 1)^{1/L}$, where $L$ is a lookahead factor which models some amount of future demand known to a provider of the resource.

26. (previously presented) A method for server allocation in a Web server "farm" based on limited information regarding future loads to achieve close to greatest possible revenue based on an assumption that revenue is proportional to the utilization of servers and differentiated by customer class comprising the steps of:

modeling the server allocation problem mathematically;

in the model, dividing time into intervals of fixed length based on the assumption that each site's demand is uniformly spread throughout each such interval;

maintaining server allocations fixed for the duration of an interval, servers being reallocated only at the beginning of an interval, and a reallocated server being unavailable for the length of the interval during which it is reallocated providing time to "scrub" the old site (customer data) to which the server was allocated, to reboot the server and to load the new site to which the server has been allocated, each server having a rate of requests it can server in a time interval and customers share servers only in the sense of using the same servers at different times, but do not use the same servers at the same time; and

associating each customer's demand with a benefit gained by the service provider in case a unit demand is satisfied and finding a time-varying server allocation that would maximize benefit gained by satisfying sites' demand,

wherein the algorithm is an intermittent reset algorithm that achieves a competitive ratio of $1 + 4/(L-7)$, where $L$ is a lookahead factor which models some amount of future demand known to a provider of the resource.

27. (canceled)